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RESPONSE UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 2188

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named
Inventor : Haines et al.

Appln. No.: 09/894,821 ✓

Filed : June 28, 2001

For : SEQUENTIAL VECTORED BUFFER
MANAGEMENT

Docket No.: S01.12-0711/STL 9608

Group Art Unit: 2188

Examiner: Gary J.
Portka

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RESPONSE AFTER FINAL

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A. Rego
PATENT ATTORNEY

Sir:

This is in response to the Office Action dated April 20, 2004. In the Office Action, claims 1-2, 9-10 and 20 were rejected and claims 3-8 and 11-19 were objected to. The Examiner's indication of allowable subject matter in claims 3-8 and 11-19 is appreciated. Applicants respectfully request reconsideration and allowance of all pending claims 1-20.

In section 3 of the Office Action, claims 1, 2, 9 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Krantz et al., U.S. Patent No. 6,530,000 B1, in view of Berning et al., U.S. Patent No. 6,038,619.

The rejection of claims 1, 2, 9 and 20 under 35 USC 103(a) as being unpatentable over Krantz et al. in view of Berning et al. is respectfully traversed.

Two claim 1 features are an arbitrated buffer memory and a traversal component configured to traverse sequentially mapped entries in the memory. As correctly pointed out in the

outstanding Office Action, Krantz et al. do not disclose a traversal component configured to traverse sequentially mapped entries in the memory. In fact, Krantz makes no suggestion of that feature. As a result, the Office Action relies on Berning et al.

The Office Action states the "teaching of allowing the traversal of sequential entries unabated as applied to Krantz is clearly equal to the recited traversal of entries prior to de-arbitrating." This statement is incorrect.

Berning et al. disclose a data buffer 7 that is distinct from the disk 11 (see Fig. 1). "Consecutive" read and write requests disclosed in that reference are defined as "pure" or "near" sequential (col. 3, line 11). To determine that, logical block addresses (LBAs) are compared between current and immediate predecessor requests. One skilled in the art understands that LBAs is an addressing scheme used to access the disk 11 (see col. 2, lines 55-61). Thus, Berning deals with consecutive requests to the disk 11, not to data buffer 7. In addition, nothing in Berning et al. suggest consecutive requests to the data buffer 7.

Yet claim 1 features a buffer memory. And the traversal component of claim 1 is configured to traverse sequentially mapped entries in the that memory. Since neither reference teaches or suggests a traversal component configured to traverse sequentially mapped entries in the memory, the memory being a buffer memory, claim 1 is not obvious and is allowable. Claim 2 is also allowable due to its dependence on allowable claim 1.

The above explanation is similar to the explanation provided in the previous amendment. The present Office Action, in response to that previous explanation, states "Berning describes requests for sequential entries in the device, and the description that this data is 'streamed' through the buffer necessarily includes that sequential data is consecutively accessed in the buffer." The conclusion "necessarily includes that sequential data is

consecutively accessed in the buffer" is entirely conclusory. The present Office Action cites to no reference to support this conclusion. No evidence of record exists that shows one skilled in the art would recognize such. No logical reasoning is provided, based on objective evidence, that supports this conclusion. The present Office Action simply provides nothing to show that "necessarily includes that sequential data is consecutively accessed in the buffer" is known to one skilled in the art.

In reality, the phrase "necessarily includes that sequential data is consecutively accessed in the buffer" is nothing more but an inherency argument. However, "that which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown." *In re Spormann*, 363 F.2d 444, 448, 150 USPQ 449, 452 (CCPA 1966) (emphasis added). Because the conclusion "necessarily includes that sequential data is consecutively accessed in the buffer" has no proper legal support, a *prima facie* case of obviousness for claim 1 has not been made. Thus, claim 1 is allowable.

Claim 9 features traversing all sequential entries in the data buffer. Krantz et al. teach or suggest nothing about accessing entries in the data buffer. Similarly, Berning et al. teach or suggest nothing about traversing all sequential entries in the data buffer. Therefore, claim 9 is not obvious and is allowable.

Claim 20 features means for buffering data written to and read from the data storage medium by utilizing sequentially mapped buffer data, associated with a requested traversal, to decrease time associated with buffering. Krantz et al. teach or suggest nothing about accessing entries in the data buffer. Similarly, Berning et al. teach or suggest nothing about traversing all sequential entries in the data buffer. Therefore, claim 20 is not obvious and is allowable.

In section 6 of the Office Action, claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Krantz et al. in view of Berning et al., and further in view of Tamura, U.S. Patent No. 6,389,508.

The rejection of claim 10 under 35 USC 103(a) as being unpatentable over Krantz et al. and Berning et al. in view of Tamura is respectfully traversed. As explained above, claim 9 is not obvious in view of Krantz et al. and Berning et al. Tamura does not overcome the deficiencies of those references. Therefore, claim 9 is not obvious over those references. As such, claim 10 is also not obvious over those references due to its dependence on allowable claim 9.

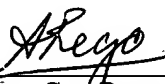
In view of the foregoing, Applicants respectfully request reconsideration and allowance of all pending claims 1-20. Favorable action upon all claims is solicited.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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